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# SEQUENCE LISTING

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<120> ANKTM1, A COLD-ACTIVATED TRP-LIKE CHANNEL EXPRESS IN NOCICEPTIVE NEURONS

<130> SCRIP1600-1

<140> US 10/539,377  
<141> 2003-12-18

<150> PCT/EP2003/014403  
<151> 2003-12-17

<150> US 60/434,540  
<151> 2002-12-18

<160> 13

<170> PatentIn version 3.3

<210> 1  
<211> 320  
<212> PRT  
<213> Mus musculus

<400> 1

Leu Asn Val Met Val Gln His Asn Arg Ile Glu Leu Leu Asn His Pro  
1 5 10 15

Val Cys Arg Glu Tyr Leu Leu Met Lys Trp Cys Ala Tyr Gly Phe Arg  
20 25 30

Ala His Met Met Asn Leu Gly Ser Tyr Cys Leu Gly Leu Ile Pro Met  
35 40 45

Thr Leu Leu Val Val Lys Ile Gln Pro Gly Met Ala Phe Asn Ser Thr  
50 55 60

Gly Ile Ile Asn Gly Thr Ser Ser Thr His Glu Glu Arg Ile Asp Thr  
65 70 75 80

Leu Asn Ser Phe Pro Ile Lys Ile Cys Met Ile Leu Val Phe Leu Ser  
85 90 95

Ser Ile Phe Gly Tyr Cys Lys Glu Val Ile Gln Ile Phe Gln Gln Lys  
100 105 110

Arg Asn Tyr Phe Leu Asp Tyr Asn Asn Ala Leu Glu Trp Val Ile Tyr  
 115 120 125

Thr Thr Ser Ile Ile Phe Val Leu Pro Leu Phe Leu Asn Ile Pro Ala  
 130 135 140

Tyr Met Gln Trp Gln Cys Gly Ala Ile Ala Ile Phe Phe Tyr Trp Met  
 145 150 155 160

Asn Phe Leu Leu Tyr Leu Gln Arg Phe Glu Asn Cys Gly Ile Phe Ile  
 165 170 175

Val Met Leu Glu Val Ile Phe Lys Thr Leu Leu Arg Ser Thr Gly Val  
 180 185 190

Phe Ile Phe Leu Leu Leu Ala Phe Gly Leu Ser Phe Tyr Val Leu Leu  
 195 200 205

Asn Phe Gln Asp Ala Phe Ser Thr Pro Leu Leu Ser Leu Ile Gln Thr  
 210 215 220

Phe Ser Met Met Leu Gly Asp Ile Asn Tyr Arg Asp Ala Phe Leu Glu  
 225 230 235 240

Pro Leu Phe Arg Asn Glu Leu Ala Tyr Pro Val Leu Thr Phe Gly Gln  
 245 250 255

Leu Ile Ala Phe Thr Met Phe Val Pro Ile Val Leu Met Asn Leu Leu  
 260 265 270

Ile Gly Leu Ala Val Gly Asp Ile Ala Glu Val Gln Lys His Ala Ser  
 275 280 285

Leu Lys Arg Ile Ala Met Gln Val Glu Leu His Thr Asn Leu Glu Lys  
 290 295 300

Lys Leu Pro Leu Trp Tyr Leu Arg Lys Val Asp Gln Arg Ser Thr Ile  
 305 310 315 320

<210> 2  
 <211> 319  
 <212> PRT  
 <213> Homo sapiens

<400> 2

Leu Asn Ala Met Val Gln Asn Asn Arg Ile Glu Leu Leu Asn His Pro

1	5	10	15
Val Cys Lys Glu Tyr Leu Leu Met Lys Trp Leu Ala Tyr Gly Phe Arg	20	25	30
Ala His Met Met Asn Leu Gly Ser Tyr Cys Leu Gly Leu Ile Pro Met	35	40	45
Thr Ile Leu Val Val Asn Ile Lys Pro Gly Met Ala Phe Asn Ser Thr	50	55	60
Gly Ile Ile Asn Glu Thr Ser Asp His Ser Glu Ile Leu Asp Thr Thr	65	70	75
Asn Ser Tyr Leu Ile Lys Thr Cys Met Ile Leu Val Phe Leu Ser Ser	85	90	95
Ile Phe Gly Tyr Cys Lys Glu Ala Gly Gln Ile Phe Gln Gln Lys Arg	100	105	110
Asn Tyr Phe Met Asp Ile Ser Asn Val Leu Glu Trp Ile Ile Tyr Thr	115	120	125
Thr Gly Ile Ile Phe Val Leu Pro Leu Phe Val Glu Ile Pro Ala His	130	135	140
Leu Gln Trp Gln Cys Gly Ala Ile Ala Val Tyr Phe Tyr Trp Met Asn	145	150	155
Phe Leu Leu Tyr Leu Gln Arg Phe Glu Asn Cys Gly Ile Phe Ile Val	165	170	175
Met Leu Glu Val Ile Leu Lys Thr Leu Leu Arg Ser Thr Val Val Phe	180	185	190
Ile Phe Leu Leu Leu Ala Phe Gly Leu Ser Phe Tyr Ile Leu Leu Asn	195	200	205
Leu Gln Asp Pro Phe Ser Ser Pro Leu Leu Ser Ile Ile Gln Thr Phe	210	215	220
Ser Met Met Leu Gly Asp Ile Asn Tyr Arg Glu Ser Phe Leu Glu Pro	225	230	235
Tyr Leu Arg Asn Glu Leu Ala His Pro Val Leu Ser Phe Ala Gln Leu	245	250	255

Val Ser Phe Thr Ile Phe Val Pro Ile Val Leu Met Asn Leu Leu Ile  
 260 265 270

Gly Leu Ala Val Gly Asp Ile Ala Glu Val Gln Lys His Ala Ser Leu  
 275 280 285

Lys Arg Ile Ala Met Gln Val Glu Leu His Thr Ser Leu Glu Lys Lys  
 290 295 300

Leu Pro Leu Trp Phe Leu Arg Lys Val Asp Gln Lys Ser Thr Ile  
 305 310 315

<210> 3  
 <211> 352  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 3

Leu Asn Thr Met Val Thr His Gly Arg Val Glu Leu Leu Ala His Pro  
 1 5 10 15

Leu Ser Gln Lys Tyr Leu Gln Met Lys Trp Asn Ser Tyr Gly Lys Tyr  
 20 25 30

Phe His Leu Ala Asn Leu Leu Ile Tyr Ser Ile Phe Leu Val Phe Val  
 35 40 45

Thr Ile Tyr Ser Ser Leu Met Met Asn Asn Ile Glu Leu Lys Ala Gly  
 50 55 60

Asp Asn Lys Thr Met Ser Gln Tyr Cys Asn Met Gly Trp Glu Gln Leu  
 65 70 75 80

Thr Met Asn Leu Ser Gln Asn Pro Ser Val Ala Ser Gln Ile Arg Leu  
 85 90 95

Asp Ser Cys Glu Glu Arg Ile Asn Arg Thr Thr Ala Ile Leu Phe Cys  
 100 105 110

Ala Val Val Ile Val Val Tyr Ile Leu Leu Asn Ser Met Arg Glu Leu  
 115 120 125

Ile Gln Ile Tyr Gln Gln Lys Leu His Tyr Ile Leu Glu Thr Val Asn  
 130 135 140

Leu Ile Ser Trp Val Leu Tyr Ile Ser Ala Leu Val Met Val Thr Pro  
 145 150 155 160

Ala Phe Gln Pro Asp Gly Gly Ile Asn Thr Ile His Tyr Ser Ala Ala  
 165 170 175

Ser Ile Ala Val Phe Leu Ser Trp Phe Arg Leu Leu Leu Phe Leu Gln  
 180 185 190

Arg Phe Asp Gln Val Gly Ile Tyr Val Val Met Phe Leu Glu Ile Leu  
 195 200 205

Gln Thr Leu Ile Lys Val Leu Met Val Phe Ser Ile Leu Ile Ile Ala  
 210 215 220

Phe Gly Leu Ala Phe Tyr Ile Leu Leu Ser Lys Ile Ile Asp Pro Gln  
 225 230 235 240

Pro Asn His Leu Ser Phe Ser Asn Ile Pro Met Ser Leu Leu Arg Thr  
 245 250 255

Phe Ser Met Met Leu Gly Glu Leu Asp Phe Val Gly Thr Tyr Val Asn  
 260 265 270

Thr Tyr Tyr Arg Asp Gln Leu Lys Val Pro Met Thr Ser Phe Leu Ile  
 275 280 285

Leu Ser Val Phe Met Ile Leu Met Pro Ile Leu Leu Met Asn Leu Leu  
 290 295 300

Ile Gly Leu Ala Val Gly Asp Ile Glu Ser Val Arg Arg Asn Ala Gln  
 305 310 315 320

Leu Lys Arg Leu Ala Met Gln Val Val Leu His Thr Glu Leu Glu Arg  
 325 330 335

Lys Leu Pro His Val Trp Leu Gln Arg Val Asp Lys Met Glu Leu Ile  
 340 345 350

<210> 4  
 <211> 368  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 4

Leu Asp Val Leu Ile Glu Asn Glu Gln Lys Glu Val Ile Ala His Thr  
 1 5 10 15

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			20					25					30		
Ala	Ser	Trp	Lys	Ile	Leu	Leu	Leu	Leu	Val	Ala	Phe	Ile	Val	Cys	Pro
		35					40					45			
Pro	Val	Trp	Ile	Gly	Phe	Thr	Phe	Pro	Met	Gly	His	Lys	Phe	Asn	Lys
	50					55					60				
Val	Pro	Ile	Ile	Lys	Phe	Met	Ser	Tyr	Leu	Thr	Ser	His	Ile	Tyr	Leu
65					70					75					80
Met	Ile	His	Leu	Ser	Ile	Val	Gly	Ile	Thr	Pro	Ile	Tyr	Pro	Val	Leu
			85						90					95	
Arg	Leu	Ser	Leu	Val	Pro	Tyr	Trp	Tyr	Glu	Val	Gly	Leu	Leu	Ile	Trp
			100					105						110	
Leu	Ser	Gly	Leu	Leu	Leu	Phe	Glu	Leu	Thr	Asn	Pro	Ser	Asp	Lys	Ser
		115					120					125			
Gly	Leu	Gly	Ser	Ile	Lys	Val	Leu	Val	Leu	Leu	Leu	Gly	Met	Ala	Gly
	130					135						140			
Val	Gly	Val	His	Val	Ser	Ala	Phe	Leu	Phe	Val	Ser	Lys	Glu	Tyr	Trp
145					150					155					160
Pro	Thr	Leu	Val	Tyr	Cys	Arg	Asn	Gln	Cys	Phe	Ala	Leu	Ala	Phe	Leu
				165					170					175	
Leu	Ala	Cys	Val	Gln	Ile	Leu	Asp	Phe	Leu	Ser	Phe	His	His	Leu	Phe
			180					185					190		
Gly	Pro	Trp	Ala	Ile	Ile	Ile	Gly	Asp	Leu	Leu	Lys	Asp	Leu	Ala	Arg
		195					200					205			
Phe	Leu	Ala	Val	Leu	Ala	Ile	Phe	Val	Phe	Gly	Phe	Ser	Met	His	Ile
	210					215					220				
Val	Ala	Leu	Asn	Gln	Ser	Phe	Ala	Asn	Phe	Ser	Pro	Glu	Asp	Leu	Arg
225					230					235					240
Ser	Phe	Glu	Lys	Lys	Asn	Arg	Asn	Arg	Gly	Tyr	Phe	Ser	Asp	Val	Arg
				245					250					255	

Met His Pro Ile Asn Ser Phe Glu Leu Leu Phe Phe Ala Val Phe Gly  
                   260                  265                  270

Gln Thr Thr Thr Glu Gln Thr Gln Val Asp Lys Ile Lys Asn Val Ala  
                   275                  280                  285

Thr Pro Thr Thr Gln Pro Tyr Trp Val Glu Tyr Leu Phe Lys Ile Val Phe  
                   290                  295                  300

Gly Ile Tyr Met Leu Val Ser Val Val Val Leu Ile Asn Leu Leu Ile  
                   305                  310                  315                  320

Ala Met Met Ser Asp Thr Tyr Gln Arg Ile Gln Val Val Leu Leu Asn  
                   325                  330                  335

Ala Leu Leu Ser Asn Ser Thr Leu Phe Ile Asn Ser Tyr Phe Asn His  
                   340                  345                  350

Lys Tyr Ile Asn Phe Ile Leu His Cys Val Leu Ile Ile Leu Tyr Phe  
                   355                  360                  365

<210> 5  
 <211> 365  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 5

Leu Asp Val Leu Ile Glu Asn Glu Gln Lys Glu Val Val Ser Tyr Ala  
                   1                  5                  10                  15

Ser Val Gln Arg Tyr Leu Thr Glu Val Trp Thr Ala Arg Val Asp Trp  
                   20                  25                  30

Ser Phe Gly Lys Phe Val Ala Phe Ser Leu Phe Val Leu Ile Cys Pro  
                   35                  40                  45

Pro Ala Trp Phe Tyr Phe Ser Leu Pro Leu Asp Ser Arg Ile Gly Arg  
                   50                  55                  60

Ala Pro Ile Ile Lys Phe Val Cys His Ile Val Ser His Val Tyr Phe  
                   65                  70                  75                  80

Thr Ile Leu Leu Thr Ile Val Val Leu Asn Ile Thr His Lys Met Tyr  
                   85                  90                  95

Glu Val Thr Ser Val Val Pro Asn Pro Val Glu Trp Leu Leu Leu Leu

100						105						110					
Trp	Leu	Ser	Gly	Asn	Leu	Val	Ser	Glu	Leu	Ser	Thr	Val	Gly	Gly	Gly		
		115					120					125					
Ser	Gly	Leu	Gly	Ile	Val	Lys	Val	Leu	Ile	Leu	Val	Leu	Ser	Ala	Met		
	130					135					140						
Ala	Ile	Ala	Val	His	Val	Leu	Ala	Phe	Leu	Leu	Pro	Ala	Val	Phe	Leu		
145					150					155					160		
Thr	His	Leu	Asp	Asn	Asp	Glu	Lys	Leu	His	Phe	Ala	Arg	Thr	Met	Leu		
				165					170					175			
Tyr	Leu	Lys	Asn	Gln	Leu	Phe	Ala	Phe	Ala	Leu	Leu	Phe	Ala	Phe	Val		
			180					185					190				
Glu	Tyr	Leu	Asp	Phe	Leu	Thr	Val	His	His	Leu	Phe	Gly	Pro	Trp	Ala		
	195						200					205					
Ile	Ile	Ile	Arg	Asp	Leu	Met	Tyr	Asp	Leu	Ala	Arg	Phe	Leu	Val	Ile		
	210					215					220						
Leu	Met	Leu	Phe	Val	Ala	Gly	Phe	Thr	Leu	His	Val	Thr	Ser	Ile	Phe		
225					230					235					240		
Gln	Pro	Ala	Tyr	Gln	Pro	Val	Asp	Glu	Asp	Ser	Ala	Glu	Leu	Met	Arg		
				245					250					255			
Leu	Ala	Ser	Pro	Ser	Gln	Thr	Leu	Glu	Met	Leu	Phe	Phe	Ser	Leu	Phe		
			260					265					270				
Gly	Leu	Val	Glu	Pro	Asp	Ser	Met	Pro	Pro	Leu	His	Leu	Val	Pro	Asp		
		275					280					285					
Phe	Ala	Lys	Ile	Ile	Leu	Lys	Leu	Leu	Phe	Gly	Ile	Tyr	Met	Met	Val		
	290					295					300						
Thr	Leu	Ile	Val	Leu	Ile	Asn	Leu	Leu	Ile	Ala	Met	Met	Ser	Asp	Thr		
305					310					315					320		
Tyr	Gln	Arg	Ile	Gln	Ala	Gln	Ser	Asp	Lys	Glu	Trp	Lys	Phe	Gly	Arg		
				325					330					335			
Ala	Ile	Leu	Ile	Arg	Gln	Met	Asn	Lys	Lys	Ser	Ala	Thr	Pro	Ser	Pro		
			340					345					350				



Ile Asn Met Leu Thr Lys Leu Ile Ile Val Leu Arg Val  
 355 360 365

<210> 6  
 <211> 331  
 <212> PRT  
 <213> *Caenorhabditis elegans*

<400> 6

Leu Lys Leu Met Ala Asp Ala Glu Lys Leu His Leu Leu Asn His Pro  
 1 5 10 15

Leu Ser Lys Ala Leu Leu Lys Tyr Lys Trp Asn Arg Leu Gly Arg Pro  
 20 25 30

Met Tyr Tyr Phe Ala Leu Phe Met Tyr Leu Val Phe Ile Val Ser Leu  
 35 40 45

Thr Gln Tyr Val Arg His Thr Lys Ala Pro Tyr Asn Val Trp Asn Glu  
 50 55 60

Glu Ser Tyr Tyr Asp Ser Glu Tyr Phe Asp Glu Asn Glu Thr Cys Pro  
 65 70 75 80

Gln Ile Asn Thr Thr Lys Pro Asp Val Val Trp Lys Ile Ile Ile Gln  
 85 90 95

Thr Leu Ala Val Cys Gln Ile Leu Val Glu Cys Phe Gln Leu Phe Gln  
 100 105 110

Arg Lys Phe Ala Tyr Leu Val Asn Trp Glu Asn Trp Ile Asp Cys Phe  
 115 120 125

Ile Tyr Ser Thr Ala Leu Ile Thr Val Tyr Asp Phe Ser Glu Cys Ser  
 130 135 140

Ala Thr Ser Gly Val Arg Gln Asn Trp Gln Trp Ile Leu Ala Ala Leu  
 145 150 155 160

Cys Ile Phe Phe Gly Trp Ile Asn Leu Leu Phe Met Ile Arg Lys Met  
 165 170 175

Pro Arg Phe Gly Ile Phe Val Val Met Phe Val Asp Ile Val Lys Thr  
 180 185 190

Phe Phe Arg Phe Phe Pro Val Phe Val Leu Phe Ile Ile Ala Phe Ser  
 195 200 205

Ser Ser Phe Tyr Val Ile Leu Gln Asn Arg Pro Glu Phe Ser Thr Ile  
 210 215 220

Phe Met Ser Pro Leu Lys Thr Thr Val Met Met Ile Gly Glu Phe Glu  
 225 230 235 240

Phe Thr Gly Ile Phe His Gly Asp Glu Thr Thr His Ala Glu Lys Met  
 245 250 255

Phe Gly Pro Ala His Thr Ala Val Ala Cys Ala Leu Phe Phe Phe Phe  
 260 265 270

Cys Ile Ile Met Thr Ile Leu Leu Met Asn Leu Leu Val Gly Leu Ala  
 275 280 285

Val Asp Asp Ile Lys Gly Val Gln Glu Lys Ala Glu Leu Lys Arg Leu  
 290 295 300

Ala Met Gln Val Asp Leu Val Leu Gln Ile Glu Ala Ser Leu His Phe  
 305 310 315 320

Phe Ile Gln Arg Thr Lys Lys Tyr Ala Thr Cys  
 325 330

<210> 7  
 <211> 333  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 7

Leu Asn Thr Phe Val Asp Glu Gly Gln Lys Glu Ile Leu Glu His Pro  
 1 5 10 15

Leu Cys Ser Ser Phe Leu Tyr Ile Lys Trp Gly Lys Ile Arg Lys Tyr  
 20 25 30

Tyr Ile Gly Arg Leu Ile Phe Cys Phe Ser Phe Val Leu Phe Leu Thr  
 35 40 45

Leu Tyr Val Leu Thr Ala Leu Ala His Asn Cys Tyr Asn Gly Ser Lys  
 50 55 60

Asn Asp Asn Thr Thr Ile Pro Ala Gln Glu Leu Cys Gln Lys Gln Ser  
 65 70 75 80

Ile Leu Gly Asp Met Leu Arg Asn Asn Pro Phe Val Met Glu Met Gln  
 85 90 95

Trp Trp Val Leu Val Ala Ile Thr Ile Val Glu Ile Phe Arg Lys Leu  
 100 105 110

Tyr Gly Ile Thr Gly Tyr Ser Ser Phe Arg His Tyr Val Thr Gln Val  
 115 120 125

Glu Asn Ile Met Glu Trp Phe Val Ile Thr Ser Val Phe Val Ile Ser  
 130 135 140

Tyr Ile Tyr Thr Asn Lys Thr Tyr Thr Phe Gln Asn His Ile Gly Ala  
 145 150 155 160

Phe Ala Val Leu Leu Gly Trp Thr Asn Leu Met Leu Met Ile Gly Gln  
 165 170 175

Leu Pro Val Phe Asp Val Tyr Val Ala Met Tyr Thr Arg Val Gln Gly  
 180 185 190

Glu Phe Ala Lys Leu Phe Met Ala Tyr Ser Cys Met Leu Ile Gly Phe  
 195 200 205

Thr Ile Ser Phe Cys Val Ile Phe Pro Ser Ser Ser Ser Phe Ala Asn  
 210 215 220

Pro Phe Met Gly Phe Ile Thr Val Leu Val Met Met Ile Gly Glu Gln  
 225 230 235 240

Asp Leu Ser Leu Leu Ile Asn Asp Pro Glu Gly Lys Asp Pro Pro Phe  
 245 250 255

Leu Leu Glu Val Ser Ala Gln Ile Thr Phe Val Leu Phe Leu Leu Phe  
 260 265 270

Val Thr Ile Ile Leu Met Asn Leu Leu Val Gly Ile Ala Val His Asp  
 275 280 285

Ile Gln Gly Leu Lys Lys Thr Ala Gly Leu Ser Lys Leu Val Arg Gln  
 290 295 300

Thr Lys Leu Ile Ser Tyr Ile Glu Ser Ala Leu Phe Asn Gly Tyr Leu  
 305 310 315 320

Pro Thr Trp Leu Arg Asn Leu Leu His Tyr Thr Ala Leu  
                           325                          330

<210> 8  
 <211> 314  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 8

Leu Leu Ser Leu Ile Glu Val Gly Gln Lys Arg Ile Leu Met His Pro  
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Leu Cys Glu Thr Phe Leu Phe Leu Lys Trp Arg Arg Ile Arg Lys Phe  
                           20                          25                          30

Phe Leu Met Ser Leu Ala Tyr His Thr Leu Phe Val Ile Leu Phe Thr  
                           35                          40                          45

Phe Tyr Val Ile Trp Val Tyr Val Arg Cys Cys Lys Lys Glu Glu Leu  
                           50                          55                          60

Cys Val Ala Pro Gly Tyr Val Ser Thr Ile Gly Tyr Leu Val Ile Ile  
 65                          70                          75                          80

Leu Asn Leu Ile Leu Leu Gly Lys Glu Val Phe Gln Met Ala His Gly  
                           85                          90                          95

Leu Arg Gly Tyr Ala Lys Tyr Trp Glu Asn Trp Leu Gln Trp Thr Ile  
                           100                          105                          110

Gly Thr Gly Val Leu Leu Cys Val Thr Pro Glu Thr Val Arg Thr Asp  
                           115                          120                          125

Asp Leu Thr Ala Val Pro Val Trp Gln His His Val Ala Ala Ile Val  
                           130                          135                          140

Ile Leu Leu Val Trp Leu Glu Leu Met Met Leu Val Gly Arg Phe Pro  
 145                          150                          155                          160

Ile Phe Gly Val Tyr Val Gln Met Phe Thr Lys Val Ala Val Asn Phe  
                           165                          170                          175

Ala Lys Phe Leu Leu Ala Tyr Ile Cys Leu Leu Val Ala Phe Gly Leu  
                           180                          185                          190

Ser Phe Ala Val Leu Phe Asn Asp Tyr Pro Ala Phe Glu Asn Ile Thr

195	200	205
Trp Ser Phe Leu Lys Ser Ile Thr Met Met Ser Gly Glu Leu Glu Phe		
210	215	220
Glu Asp Ile Phe Tyr Gly Asp Tyr Ala Val Lys Phe Pro Val Thr Ala		
225	230	235
His Ile Ile Phe Leu Ser Phe Val Leu Leu Val Thr Val Ile Leu Thr		
245	250	255
Asn Leu Met Val Gly Leu Ala Val Ser Asp Ile Gln Gly Leu Gln Val		
260	265	270
Ser Ala Thr Leu Asp Arg Leu Val Arg Gln Ala Glu Leu Val Ser Arg		
275	280	285
Leu Glu Ser Leu Phe Phe Ser Arg Leu Leu Arg Ser Ala Pro Thr Asn		
290	295	300
Leu Ile Gln Leu Cys Lys Arg Ser Ala Leu		
305	310	

<210> 9  
 <211> 20  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Primer

<400> 9  
 agtggggaga ctaccctgtg

20

<210> 10  
 <211> 21  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Primer

<400> 10  
 tttatcatgc ccattctttg c

21

<210> 11  
 <211> 36  
 <212> DNA  
 <213> Artificial sequence

<220>

<223> Primer

<400> 11

tttggatccg ccaccatgaa gcgcggcttg aggagg

36

<210> 12

<211> 37

<212> DNA

<213> Artificial sequence

<220>

<223> Primer

<400> 12

tttgcggccg cctaaaagtc cgggtggcta atagaac

37

<210> 13

<211> 3378

<212> DNA

<213> Mus musculus

<400> 13

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gaactgatca tcaatgggtc ttcgtgtgaa gtgctgaata taatggatgg ttatggaaat	300
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tatgggtgaaa agaacggcta cagcaggag actcacatta attttgtgaa tcacaagaaa	720
gccagccctc tccacctagc agttcaaagc ggagacttgg acatgattaa gatgtgcctg	780
gacaacgggt cacacatcga catgatggag aatgccaaat gcatggccct ccattttgct	840
gcaaccagg gagccactga catcgtaag ctcatgatct catcctatac cggaagtagt	900
gatattgtga atgcagttga tggcaatcag gagaccctgc ttcacagagc ctcgttatct	960
gatcaccatg acctggcaga atacctaata tcagtgggag cagacatcaa cagcactgat	1020
tctgaaggac gctctccact tatttttagca acagcttctg catcctggaa cattgtgaat	1080
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catttgactg	tgcagcagcc	ttatggacta	agaaatthgc	ggcctgagtt	tatgcagatg	1200
caacacatca	aagagctggt	gatggatgaa	gacaatgacg	gatgcacacc	tctccattat	1260
gcctgtaggc	aggggggtcc	tgtctctgta	aataacctcc	ttggcttcaa	tgtgtccatt	1320
catagcaaaa	gtaaagataa	gaagtcgccc	ctgcattttg	cagccagtta	tgggcgcac	1380
aatacatgtc	agagacttct	gcaagacata	agtgatacga	ggcttttgaa	tgaaggggat	1440
ctccatggga	tgacccctct	ccacctggca	gcaaaaaatg	ggcatgataa	agtcgttcaa	1500
ctccttctga	agaaaggggc	cttattttct	agtgaccaca	atggctggac	tgctttgcat	1560
cacgcctcca	tgggtgggta	cactcagacc	atgaagggtca	ttcttgatac	taacttgaaa	1620
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